

Hydraulic layouts for

Oventrop **REGTRONIC PX**

Important!

Please read the instructions carefully before installing and operating the unit!

Failure to do this can void product warranty!
Please keep the instructions in a safe place!

This unit described has been manufactured and inspected according to CE regulations.

Correct procedure for entering or changing system settings

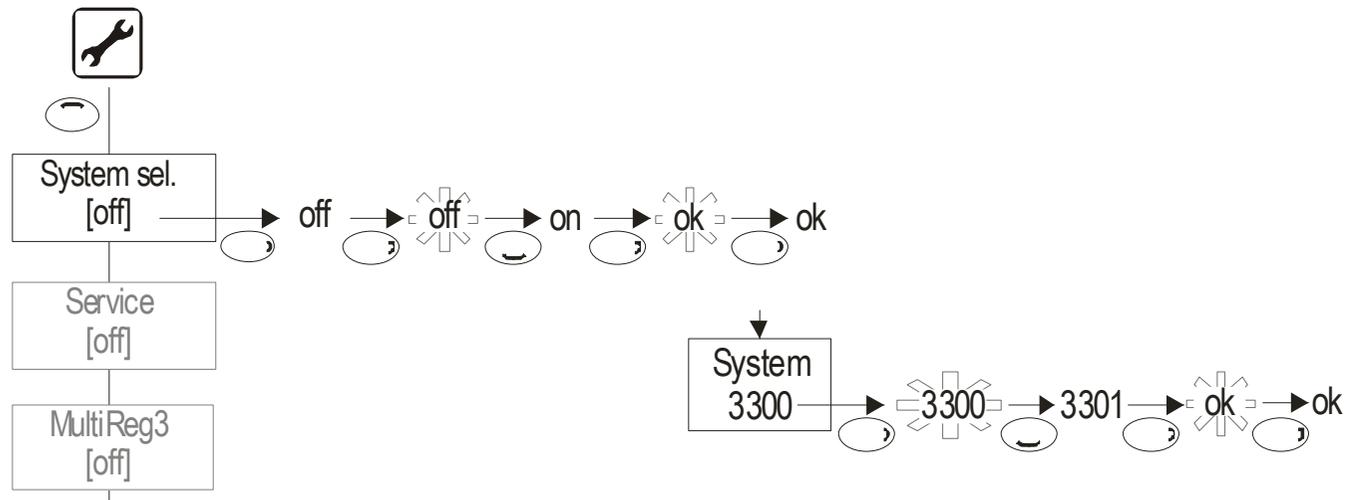
During initial start-up of the equipment, proceed as follows:

1. Select the hydraulic layout (e.g. X1010)
2. Enter the corresponding system number (3301) in the "System Settings" menu (see example below).

Finally, configure any selected ancillary features such as multi-function regulators, etc.

Note: 3300 is the initial software set!

Example: Change from 3300 initial software set to 3301

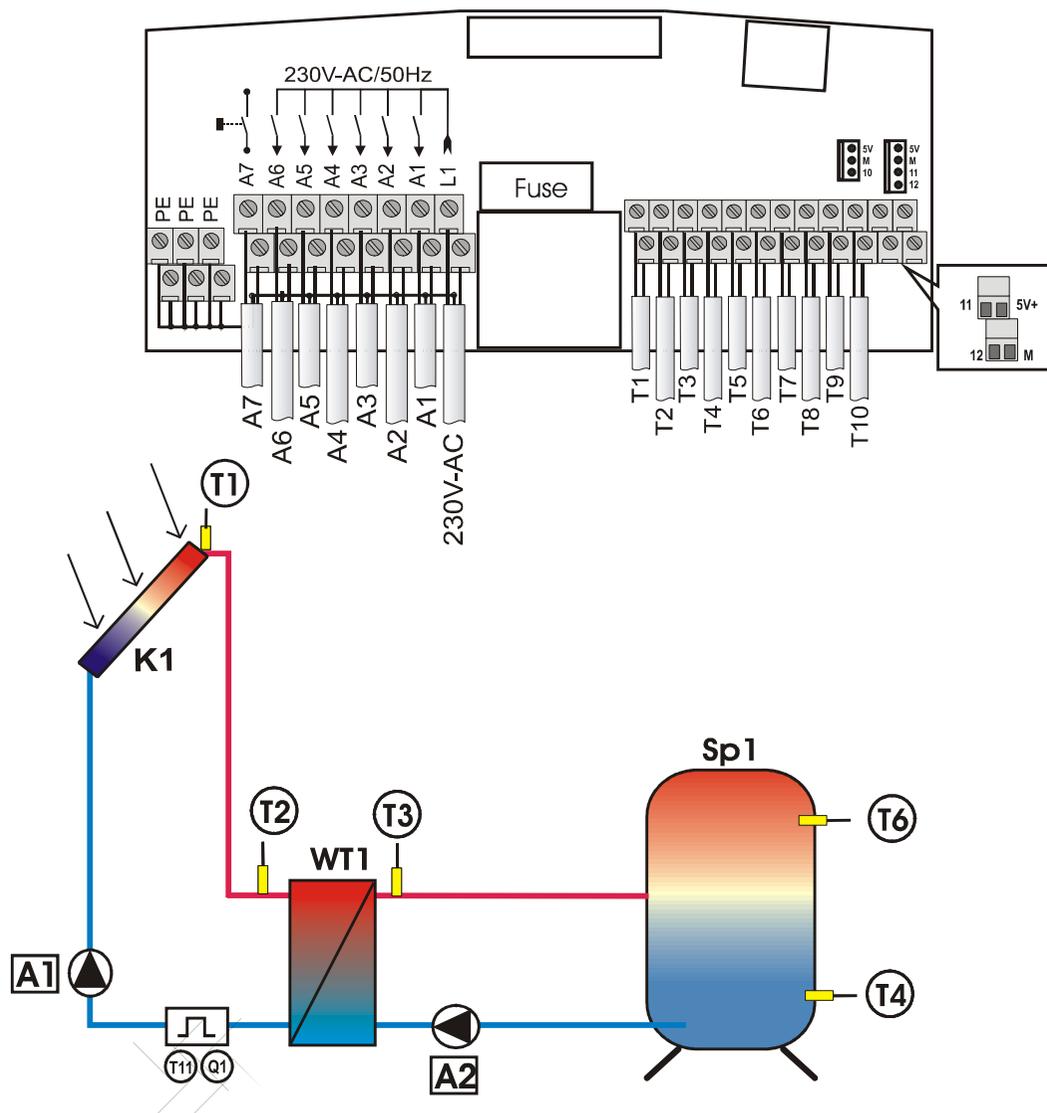


Overview of individual layouts for Regtronic PX

System	Layout	Solar circuit	Ancillary features
3301	X1010	1 collector, 1 storage tank, 2 pumps	5 multi-function regulators
3302	X1020	1 collector, 1 storage tank, 2 pumps, 1 changeover valve	3 multi-function regulators
3303	X1030	1 collector, 2 storage tanks, 2 pumps, 1 changeover valve	3 multi-function regulators
3304	X2010	2 collectors, 1 storage tank, 3 pumps	4 multi-function regulators
3305	X2020	2 collectors, 1 storage tank, 3 pumps, 1 changeover valve	2 multi-function regulators
3306	X2030	2 collectors, 2 storage tanks, 3 pumps, 1 changeover valve	2 multi-function regulators

Note: The following layout schematics do not represent complete hydraulic system diagrams.

Layout REGUSOL X1010, system no.: 3301



Ancillary features for multi-function regulators

Heating, cooling, threshold switch, increased return flow, wood boiler feature, difference regulator, circulation function, alarm and timer

All sensors can be used for switching and control functions (included those already in use) Only the output assignments are fixed.

Tx** - Select as required

Regtronic PX

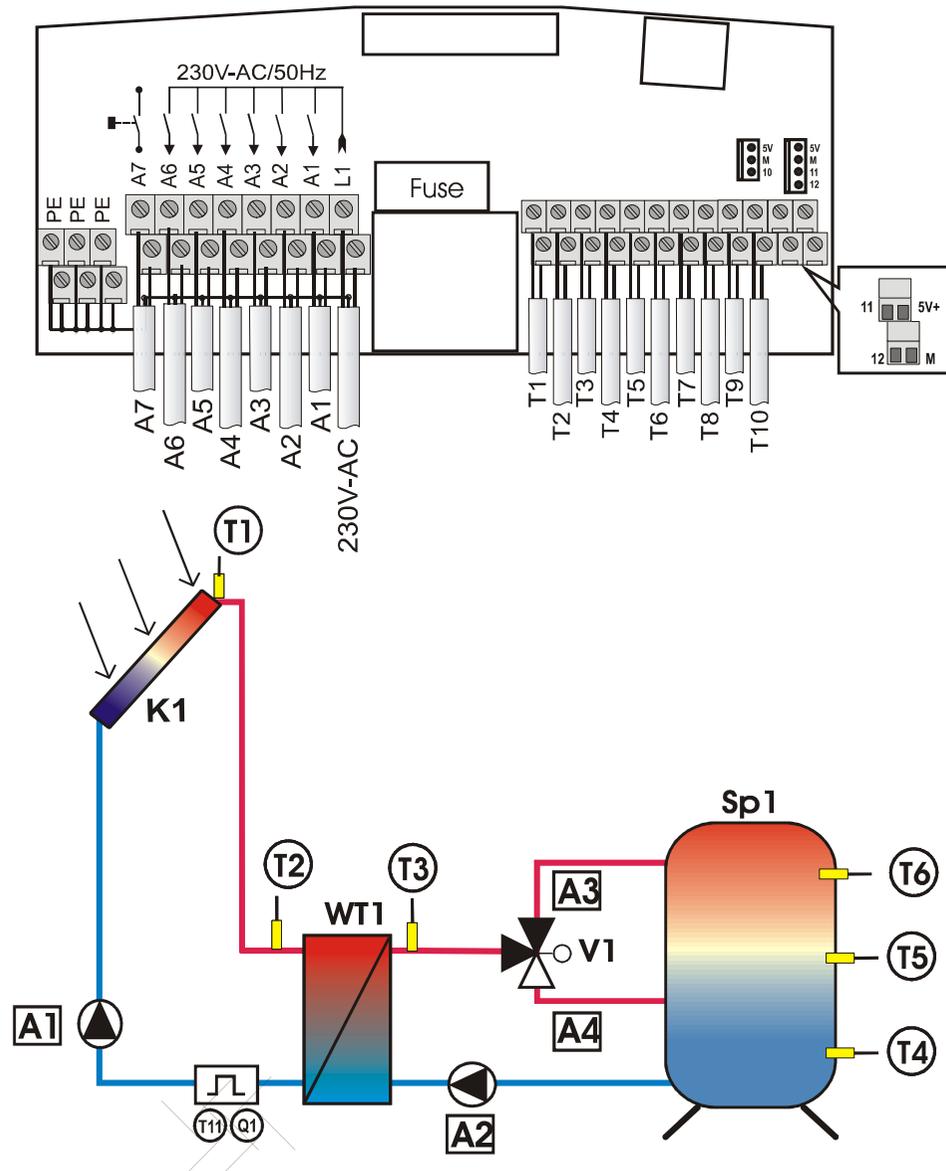
Sensor connections for X1010 layout:

230 V connections for X1010 layout:

Description	Reference		Comment
	Connection terminal	Plan no.	
Collector 1 temperature sensor	1	T1	Required for measuring the collector temperature
Temperature sensor – primary heat exchanger	2	T2	Required for measuring the heat exchanger temperature in the primary circuit
Temperature sensor – secondary heat exchanger	3	T3	Required for measuring the heat exchanger temperature in the secondary circuit
Storage tank 1 (lower) temperature sensor	4	T4	Required for measuring the lower storage tank temperature
Temperature sensor	5	T5	Select as required. Not used here.
Storage tank 1 (upper) temperature sensor	6	T6	Required for measuring the upper storage tank temperature
Multi-function regulator temperature sensor	7	T7	Sensor available for the multi-function regulator. T7 is a preset: any other sensor may also be used.
Multi-function regulator temperature sensor	8	T8	Sensor available for the multi-function regulator. T8 is a preset: any other sensor may also be used.
Temperature sensor	9	T9	Can be assigned as needed. Not used here.
Temperature sensor	10	T10	Can be assigned as needed. Not used here.
VFS Grundfos sensor	VFS 11/12/5V/M (11=Q, 12=T)	T11/Q1	Energy yield measurement with Grundfos sensor. Necessary if "output measurement" selected.

Description	Reference		Comment
	Connection terminal	Plan no.	
Mains power	Mains	Mains	Ensure it can be switched off. (by removing a plug or double-pole isolation)
Switched output for solar circuit pump	A1	A1	230 V connection for pump <i>RPM controlled</i> if RPM min programmed < 100%
Switched output for charging circuit pump	A2	A2	230 V connection for pump <i>RPM controlled</i> if RPM min programmed < 100%
Switched output for multi-function regulator	A3	A3	230 V connection for pump or valve if "MFR1" activated
Switched output for multi-function regulator	A4	A4	230 V connection for pump or valve if "MFR2" activated
Switched output for multi-function regulator	A5	A5	230 V connection for pump or valve if "MFR3" activated
Switched output for multi-function regulator	A6	A6	230 V connection for pump or valve if "MFR4" activated
Switched output for multi-function regulator	A7	A7	230 V connection for pump or valve if "MFR5" activated

Layout REGUSOL X1020, system no: 3302



Ancillary features for multi-function regulator

Heating, cooling, threshold switch, increased return flow, wood boiler feature, difference regulator, circulation function, alarm and timer

All sensors can be used for switching and control functions (included those already in use)
Only the output assignments are fixed.

Tx** - Select as required

Regtronic PX

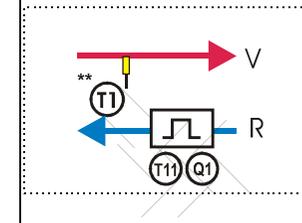
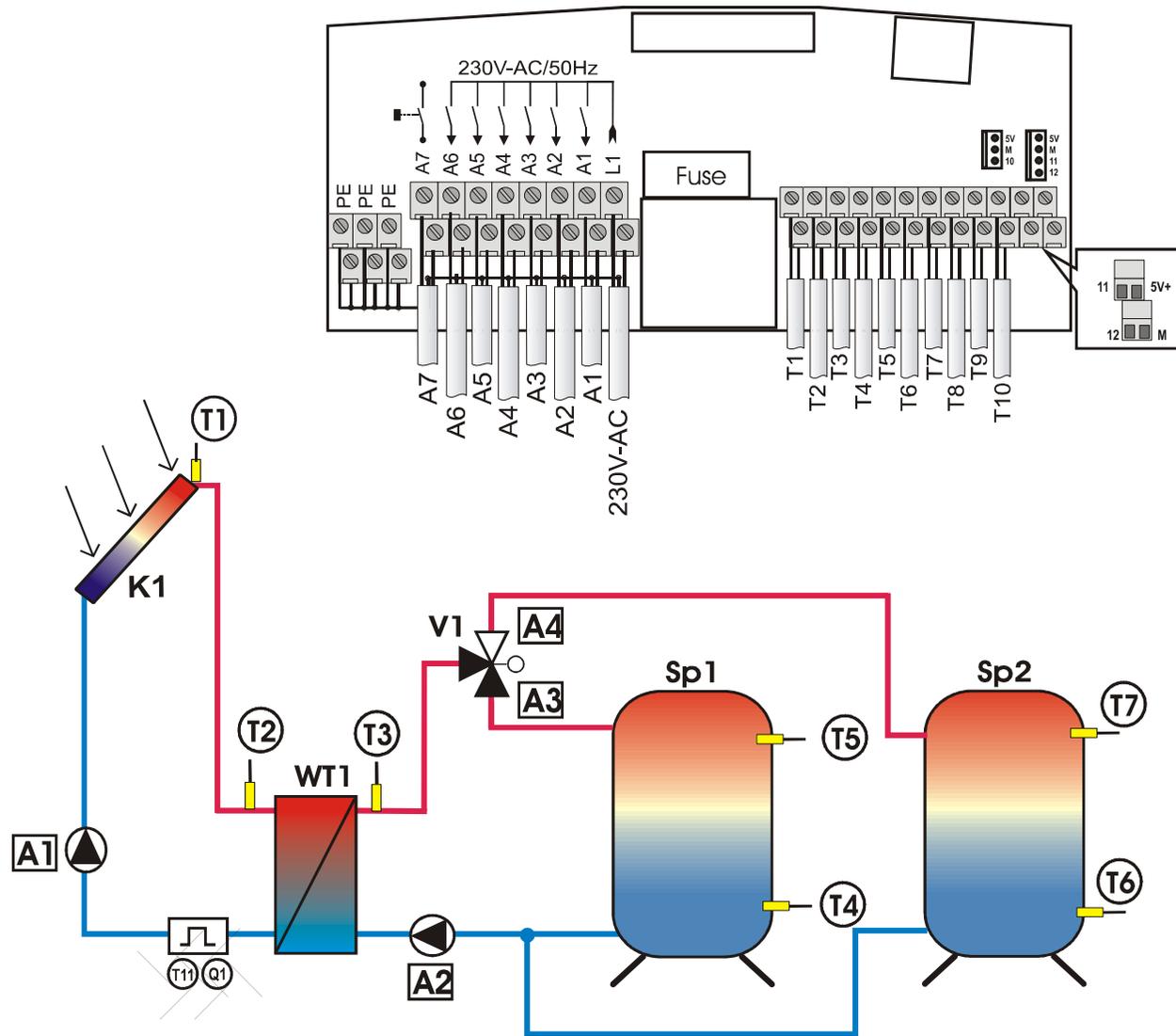
Sensor connections for X1020 layout:

230 V connections for X1020 layout:

Description	Reference		Comment
	Connection terminal	Plan no.	
Collector 1 temperature sensor	1	T1	Required for measuring the collector temperature
Temperature sensor – primary heat exchanger	2	T2	Required for measuring the heat exchanger temperature in the primary circuit
Temperature sensor – secondary heat exchanger	3	T3	Required for measuring the heat exchanger temperature in the secondary circuit
Storage tank 1 (lower) temperature sensor	4	T4	Required for measuring the lower storage tank temperature
Storage tank 1 (centre) temperature sensor	5	T5	Required for measuring the centre storage tank temperature
Storage tank 1 (upper) temperature sensor	6	T6	Required for measuring the upper storage tank temperature
Multi-function regulator temperature sensor	7	T7	Sensor available for the multi-function regulator. T7 is a preset: any other sensor may also be used.
Multi-function regulator temperature sensor	8	T8	Sensor available for the multi-function regulator. T8 is a preset: any other sensor may also be used.
Temperature sensor	9	T9	Can be assigned as needed. Not used here.
Temperature sensor	10	T10	Can be assigned as needed. Not used here.
VFS Grundfos sensor	VFS 11/12/5V/M (11=Q, 12=T)	T11/Q1	Energy yield measurement with Grundfos sensor. Necessary if "output measurement" selected.

Description	Reference		Comment
	Connection terminal	Plan no.	
Mains power	Mains	Mains	Ensure it can be switched off. (by removing a plug or double-pole isolation)
Switched output for solar circuit pump	A1	A1	230 V connection for pump <i>RPM controlled</i> if RPM min programmed < 100%
Switched output for charging circuit pump	A2	A2	230 V connection for pump <i>RPM controlled</i> if RPM min programmed < 100%
Switched output for 3-way valve	A3	V1	Switched output for 3-way valve: charging the top part of the storage tank
Switched output for 3-way valve	A4	V1	Switched output for 3-way valve: charging the centre part of the storage tank
Switched output for multi-function regulator	A5	A5	230 V connection for pump or valve if "MFR1" activated
Switched output for multi-function regulator	A6	A6	230 V connection for pump or valve if "MFR2" activated
Switched output for multi-function regulator	A7	A7	230 V connection for pump or valve if "MFR3" activated

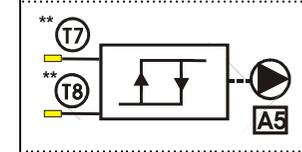
Layout REGUSOL X1030, system no: 3303



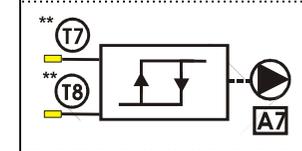
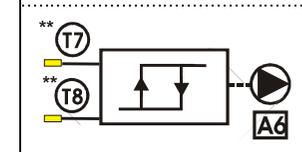
Ancillary features for multi-function regulator

Heating, cooling, threshold switch, increased return flow, wood boiler feature, difference regulator, circulation function, alarm and timer

All sensors can be used for switching and control functions (included those already in use)
Only the output assignments are fixed.



Charging plans:
- Serial charging:
- Synchronous charging
(see control unit guide)



Tx** - Select as required

Regtronic PX

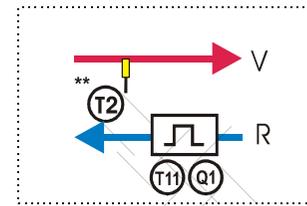
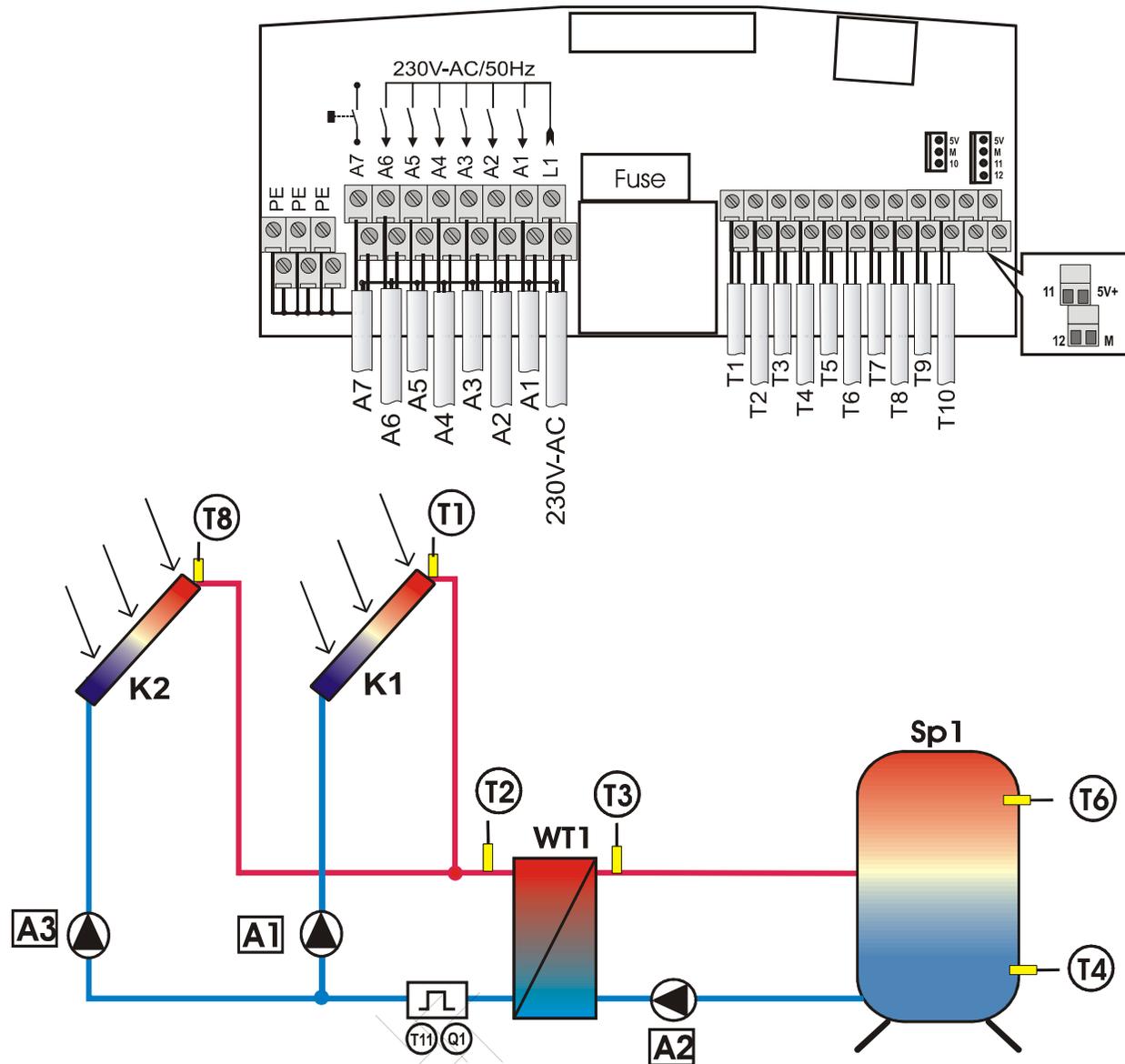
Sensor connections for X1030 layout:

230 V connections for X1030 layout:

Description	Reference		Comment
	Connection terminal	Plan no.	
Collector 1 temperature sensor	1	T1	Required for collector temperature
Temperature sensor – primary heat exchanger	2	T2	Required for the heat exchanger temperature in the primary circuit
Temperature sensor – secondary heat exchanger	3	T3	Required for the heat exchanger temperature in the secondary circuit
Storage tank 1 (lower) temperature sensor	4	T4	Required for measuring the lower storage temperature of storage tank 1
Storage tank 1 (upper) temperature sensor	5	T5	Required for measuring the upper storage temperature of storage tank 1
Storage tank 2 (lower) temperature sensor	6	T6	Required for measuring the lower storage temperature of storage tank 2
Storage tank 2 (upper) temperature sensor	7	T7	Required for measuring the upper storage temperature of storage tank 2
Multi-function regulator temperature sensor	8	T8	Sensor available for the multi-function regulator. T8 is a preset: any other sensor may also be used.
Temperature sensor	9	T9	Can be assigned as needed. Not used here.
Temperature sensor	10	T10	Can be assigned as needed. Not used here.
VFS Grundfos sensor	VFS 11/12/5V/M (11=Q, 12=T)	T11/Q1	Energy yield measurement with Grundfos sensor. Necessary if "output measurement" selected.

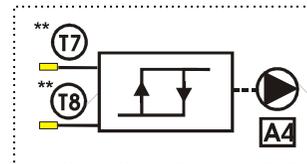
Description	Reference		Comment
	Connection terminal	Plan no.	
Mains power	Mains	Mains	Ensure it can be switched off. (by removing a plug or double-pole isolation)
Switched output for solar circuit pump	A1	A1	230 V connection for pump <i>RPM controlled</i> if RPM min programmed < 100%
Switched output for charging circuit pump	A2	A2	230 V connection for pump <i>RPM controlled</i> if RPM min programmed < 100%
Switched output for 3-way valve	A3	V1	Switched output for 3-way valve: charging the primary storage tank
Switched output for 3-way valve	A4	V1	Switched output for 3-way valve: charging the secondary storage tank
Switched output for multi-function regulator	A5	A5	230 V connection for pump or valve if "MFR1" activated
Switched output for multi-function regulator	A6	A6	230 V connection for pump or valve if "MFR2" activated
Switched output for multi-function regulator	A7	A7	230 V connection for pump or valve if "MFR3" activated

Layout REGUSOL X2010, system no: 3304

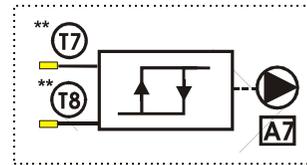
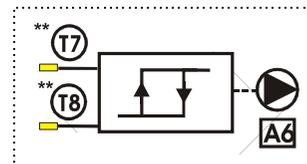
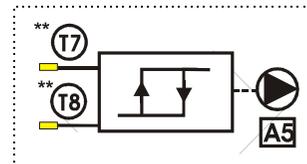


Ancillary features for multi-function regulator

Heating, cooling, threshold switch, increased return flow, wood boiler feature, difference regulator, circulation function, alarm and timer



All sensors can be used for switching and control functions (included those already in use) Only the output assignments are fixed.



Tx** - Select as required

Regtronic PX

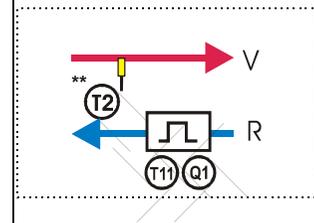
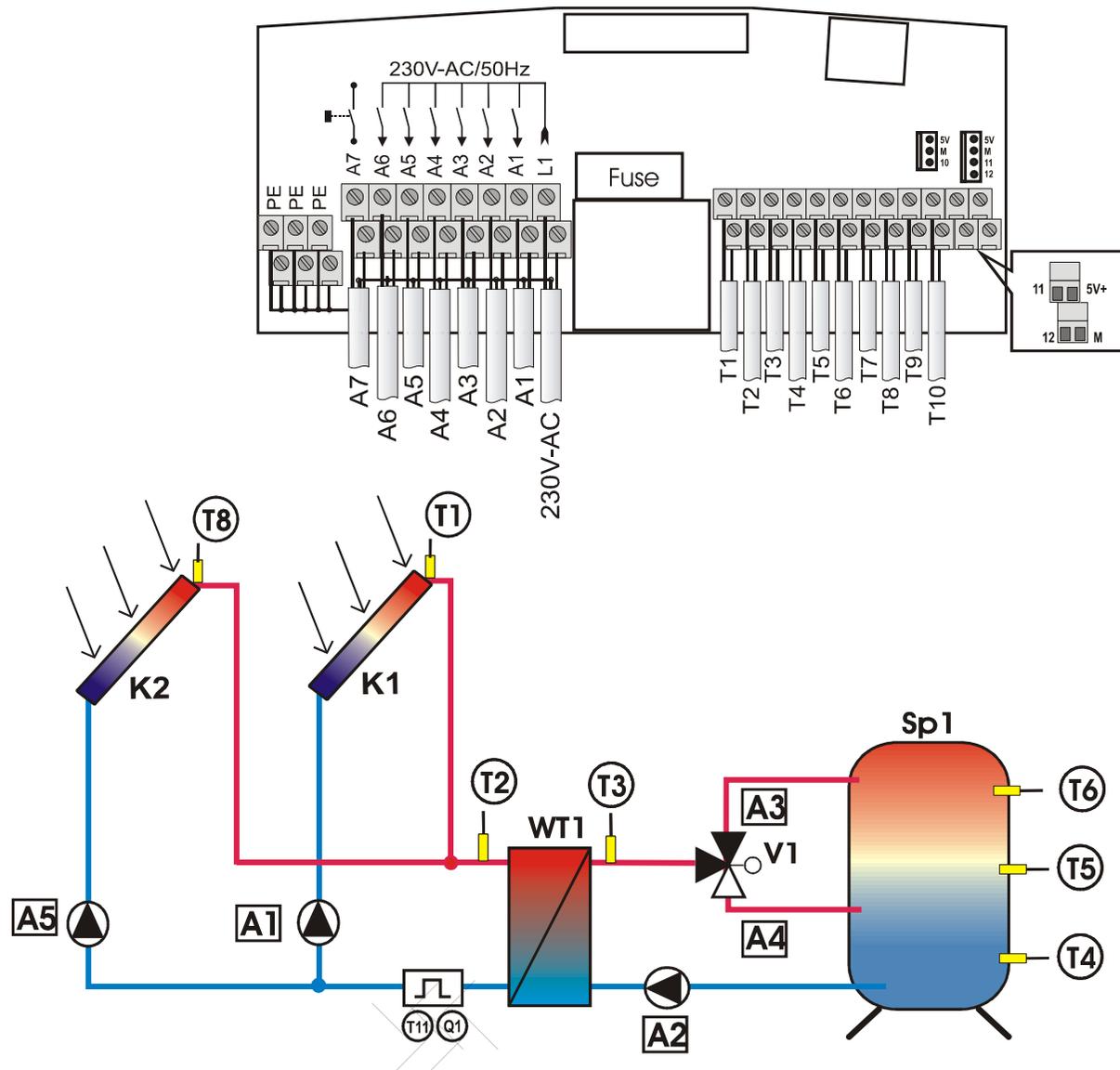
Sensor connections for X2010 layout:

230 V connections for X2010 layout:

Description	Reference		Comment
	Connection terminal	Plan no.	
Collector 1 temperature sensor	1	T1	Required for collector temperature
Temperature sensor – primary heat exchanger	2	T2	Required for the heat exchanger temperature in the primary circuit
Temperature sensor – secondary heat exchanger	3	T3	Required for the heat exchanger temperature in the secondary circuit
Storage tank 1 (lower) temperature sensor	4	T4	Required for measuring the lower storage temperature
Temperature sensor	5	T5	Can be assigned as needed. Not used here.
Storage tank 1 (upper) temperature sensor	6	T6	Required for measuring the upper storage temperature
Multi-function regulator temperature sensor	7	T7	Sensor available for the multi-function regulator. T7 is a preset: any other sensor may also be used.
Collector 2 temperature sensor	8	T8	Required for collector temperature
Temperature sensor	9	T9	Can be assigned as needed. Not used here.
Temperature sensor	10	T10	Can be assigned as needed. Not used here.
VFS Grundfos sensor	VFS 11/12/5V/M (11=Q, 12=T)	T11/Q1	Energy yield measurement with Grundfos sensor. Necessary if "output measurement" selected.

Description	Reference		Comment
	Connection terminal	Plan no.	
Mains power	Mains	Mains	Ensure it can be switched off. (by removing a plug or double-pole isolation)
Switched output for solar circuit pump – collector circuit 1	A1	A1	230 V connection for pump <i>RPM controlled</i> if RPM min programmed < 100%
Switched output for charging circuit pump	A2	A2	230 V connection for pump <i>RPM controlled</i> if RPM min programmed < 100%
Switched output for solar circuit pump – collector circuit 2	A3	A3	230 V connection for pump <i>RPM controlled</i> if RPM min programmed < 100%
Switched output for multi-function regulator	A4	A4	230 V connection for pump or valve if "MFR1" activated
Switched output for multi-function regulator	A5	A5	230 V connection for pump or valve if "MFR2" activated
Switched output for multi-function regulator	A6	A6	230 V connection for pump or valve if "MFR3" activated
Switched output for multi-function regulator	A7	A7	230 V connection for pump or valve if "MFR4" activated

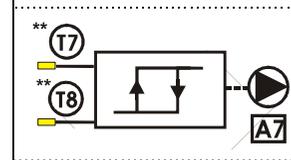
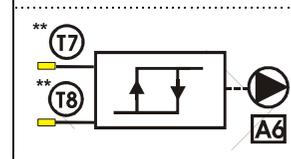
Layout REGUSOL X2020, system no: 3305



Ancillary features for multi-function regulator

Heating, cooling, threshold switch, increased return flow, wood boiler feature, difference regulator, circulation function, alarm and timer

All sensors can be used for switching and control functions (included those already in use)
Only the output assignments are fixed.



Tx** - Select as required

Regtronic PX

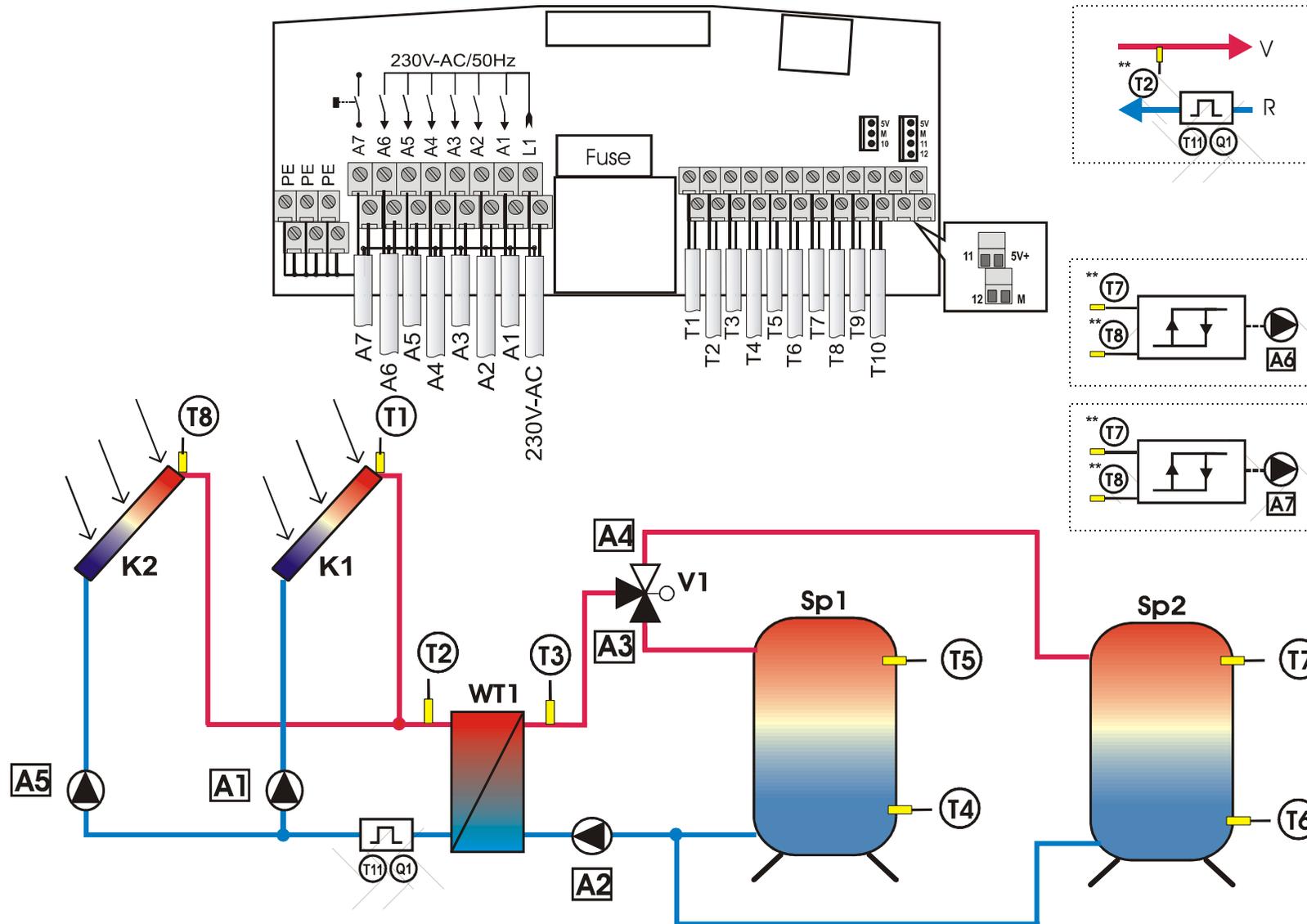
Sensor connections for X2020 layout:

230 V connections for X2020 layout:

Description	Reference		Comment
	Connection terminal	Plan no.	
Collector 1 temperature sensor	1	T1	Required for collector temperature
Temperature sensor – primary heat exchanger	2	T2	Required for the heat exchanger temperature in the primary circuit
Temperature sensor – secondary heat exchanger	3	T3	Required for the heat exchanger temperature in the secondary circuit
Storage tank 1 (lower) temperature sensor	4	T4	Required for measuring the lower storage temperature
Storage tank 1 (centre) temperature sensor	5	T5	Required for measuring the centre storage temperature
Storage tank 1 (upper) temperature sensor	6	T6	Required for measuring the upper storage temperature
Multi-function regulator temperature sensor	7	T7	Sensor available for the multi-function regulator. T7 is a preset: any other sensor may also be used.
Collector 2 temperature sensor	8	T8	Required for collector temperature
Temperature sensor	9	T9	Can be assigned as needed. Not used here.
Temperature sensor	10	T10	Can be assigned as needed. Not used here.
VFS Grundfos sensor	VFS 11/12/5V/M (11=Q, 12=T)	T11/Q1	Energy yield measurement with Grundfos sensor. Necessary if "output measurement" selected.

Description	Reference		Comment
	Connection terminal	Plan no.	
Mains power	Mains	Mains	Ensure it can be switched off. (by removing a plug or double-pole isolation)
Switched output for solar circuit pump	A1	A1	230 V connection for pump <i>RPM controlled</i> if RPM min programmed < 100%
Switched output for charging circuit pump	A2	A2	230 V connection for pump <i>RPM controlled</i> if RPM min programmed < 100%
Switched output for 3-way valve	A3	V1	Switched output for 3-way valve: charging the top part of the storage tank
Switched output for 3-way valve	A4	V1	Switched output for 3-way valve: charging the centre part of the storage tank
Switched output for solar circuit pump – collector circuit 2	A5	A3	230 V connection for pump <i>RPM controlled</i> if RPM min programmed < 100%
Switched output for multi-function regulator	A6	A6	230 V connection for pump or valve if "MFR1" activated
Switched output for multi-function regulator	A7	A7	230 V connection for pump or valve if "MFR2" activated

Layout REGUSOL X2030, system no: 3306



Ancillary features for multi-function regulator

Heating, cooling, threshold switch, increased return flow, wood boiler feature, difference regulator, circulation function, alarm and timer

All sensors can be used for switching and control functions (included those already in use)

Only the output assignments are fixed.

Charging plans:
 - Serial charging:
 - Synchronous charging
 (see control unit guide)

Tx** - Select as required

Regtronic PX

Sensor connections for X2030 layout:

230 V connections for X2030 layout:

Description	Reference		Comment
	Connection terminal	Plan no.	
Collector 1 temperature sensor	1	T1	Required for collector temperature
Temperature sensor – primary heat exchanger	2	T2	Required for the heat exchanger temperature in the primary circuit
Temperature sensor – secondary heat exchanger	3	T3	Required for the heat exchanger temperature in the secondary circuit
Storage tank 1 (lower) temperature sensor	4	T4	Required for measuring the lower storage temperature of storage tank 1
Storage tank 1 (upper) temperature sensor	5	T5	Required for measuring the upper storage temperature of storage tank 1
Storage tank 2 (lower) temperature sensor	6	T6	Required for measuring the lower storage temperature of storage tank 2
Storage tank 2 (upper) temperature sensor	7	T7	Required for measuring the upper storage temperature of storage tank 2
Collector 2 temperature sensor	8	T8	Required for collector temperature
Temperature sensor	9	T9	Can be assigned as needed. Not used here.
Temperature sensor	10	T10	Can be assigned as needed. Not used here.
VFS Grundfos sensor	VFS 11/12/5V/M (11=Q, 12=T)	T11/Q1	Energy yield measurement with Grundfos sensor. Necessary if "output measurement" selected.

Description	Reference		Comment
	Connection terminal	Plan no.	
Mains power	Mains	Mains	Ensure it can be switched off. (by removing a plug or double-pole isolation)
Switched output for solar circuit pump	A1	A1	230 V connection for pump <i>RPM controlled</i> if RPM min programmed < 100%
Switched output for charging circuit pump	A2	A2	230 V connection for pump <i>RPM controlled</i> if RPM min programmed < 100%
Switched output for 3-way valve	A3	V1	Switched output for 3-way valve: charging the primary storage tank
Switched output for 3-way valve	A4	V1	Switched output for 3-way valve: charging the secondary storage tank
Switched output for solar circuit pump – collector circuit 2	A5	A3	230 V connection for pump <i>RPM controlled</i> if RPM min programmed < 100%
Switched output for multi-function regulator	A6	A6	230 V connection for pump or valve if "MFR1" activated
Switched output for multi-function regulator	A7	A7	230 V connection for pump or valve if "MFR2" activated